CHAPTER 1

DEVELOPMENT OF THE NAVY SAFETY PROGRAM

We designed this training manual to help acquaint you with the Navy's safety and occupational health programs, their setup, management, and supervision. In addition to the Navy Occupational Safety and Health (NAVOSH) Program, we will discuss the Shore Safety Program, the Afloat Safety Program, the Aviation Safety Program, and your duties as a naval safety supervisor. We have provided the appropriate references for specific safety standards throughout this manual and various safety terms and acronyms. You will also find information on the following program elements:

- Safety program promotion and attitudes
- Mishap causes and prevention
- Mishap investigation and reporting
- Safety program evaluation
- NAVOSH Program elements
- Traffic safety
- Explosives safety
- Athletic, recreation, and home safety programs

In this chapter, we cover the history and development of the Navy Occupational Safety and Health Program and its current organization. We also describe the role of safety supervisors, their responsibilities, and the criteria for their selection as safety supervisors.

HISTORY OF NAVY SAFETY PROGRAM

As your employer, the Navy is obligated by law to provide you with a safe and healthy work environment. Shipboard life, shipyard industrial activities, and aviation maintenance areas, especially, are inherently dangerous. We must keep our crewmembers, as well as civilian workers, healthy and ready to perform their missions.

The Navy has conducted safety and occupational health programs for many years. Historically, general and off-duty safety has been an element of the overall Navy safety program managed by Navy line functions. The Bureau of Medicine and Surgery (BUMED) conducts the occupational health program element.

The following is a brief listing of the milestones in the Navy's safety program:

1917 Safety engineers were assigned to each naval shipyard.

1922 Safety programs for civilian employees were introduced at all naval activities.

1929 Enlisted personnel on shore duty were included in safety programs.

1947 The Navy Department Safety Council was organized under the Director of Safety of the Office of Industrial Relations (OIR). Its original mission was to coordinate safety procedures and to provide communications between the bureau safety engineers and the technical staff of the OIR safety branch. In 1967, the council's mission was expanded to include the development and maintenance of the *U.S. Navy Safety Precautions Manual,* OPNAV 34P1.

1951 The transition from propeller to jet aircraft helped the Secretary of the Navy (SECNAV) to establish the Naval Aviation Safety Council. In 1955 the name was changed to the Naval Aviation Safety Center.

1963 The Navy was shaken by the sudden loss of the USS *Thresher* (SSN-593), in which 129 sailors were lost. The Navy convened a court of inquiry to examine the circumstances leading up to and surrounding the incident. The court's findings resulted in the creation of the Submarine Safety Program (SUBSAFE).

1963-Cont.	Its purpose was to impose high standards of quality control on submarine construction and operations. In 1964 the Chief of Naval Operations (CNO) established the Submarine Safety Center at the submarine base in New London, Connecticut, to examine and coordinate all matters of submarine safety.
1966-1967	SECNAV tasked CNO with reviewing the entire Navy Safety Program after a series of fires, collisions, and other mishaps involving surface ships resulted in more than 200 deaths and $100 million in damages. On 3 May 1968, as a result of the CNO's findings, SECNAV established the Naval Safety Center.
1970	The Occupational Safety and Health Act (OSHA) of 1970 became law.
1973	The Commander, Naval Safety Center, was designated as the CNO's Safety Coordinator (N09F), reporting directly to the Vice Chief of Naval Operations. This designation made the Naval Safety Center's mission more specific and all-encompassing.
1983	The first *Navy Occupational Safety and Health (NAVOSH) Program Manual,* OPNAVINST 5100.23C, was implemented.

Safety programs gained special prominence after passage of the Occupational Safety and Health Act on 31 December 1970. The primary thrust of the act was directed at the private-sector employer. However, section 19 of the act and several later Executive orders directed federal agencies to set up and maintain comprehensive and effective occupational safety and health programs.

On 26 July 1971, Executive Order (EO) 11612, the Occupational Safety and Health Programs for Federal Employees, was signed. This EO stated that the federal government, as the nation's largest employer, has a special obligation to set an example for safe and healthful employment. In that regard, the head of each federal department and agency was directed to establish an occupational safety and health program.

Over the next 3 years, federal agencies made only moderate progress. Congress received considerable criticism for a perceived double standard in occupational safety and health requirements between the private sector and federal agencies. As a result, EO 11807 replaced EO 11612 in 1974.

This new order more clearly defined the scope, requirements, and responsibilities of federal agency programs. In addition, EO 11807 tasked the Secretary of Labor to issue guidelines designed to help federal agencies in establishing their programs. These "guidelines" were issued on 9 October 1974 as Title 29, Code of Federal Regulations, Part 1960 (29 CFR 1960), Safety and Health Provisions for Federal Employees.

Some critics were still not satisfied by the actions described above. Several federal agencies questioned the regulatory authority of the Department of the Labor guidelines (29 CFR 1960). On 26 February 1980, EO 12196, Occupational Safety and Health programs for Federal Employees, superseded EO 11807. In addition, the Department of Labor guidelines (29 CFR 1960) were revised on 21 October 1980. They were reissued as Basic Program Elements for Federal Employee Occupational Safety and Health Programs.

During the past 10 years, the Department of Defense (DOD) has issued many directives and instructions to carry out the federal guidance outlined in the above paragraphs. Prominent among those directives and instructions is the *Safety and Occupational Health Policy for the Department of Defense,* DOD Directive 1000.3. This directive outlines general DOD policy and procedures for carrying out the Occupational Safety and Health Act and its associated Executive order. Another prominent instruction is DOD Instruction 6055.1, *Department of Defense Occupational Safety and Health Program.* This instruction provides the guidance needed to carry out the basic occupational safety and health program elements specified in 29 CFR. It also provides for variances in equipment standards that are unique to the military.

DOD Directive 1000.3 designates the Assistant Secretary of the Navy (Installations and Environment) as the safety and occupational health official for the Department of the Navy. He or she establishes, maintains, and modifies safety and occupational health programs. These programs carry out the requirements of DOD policy issuances and provide protection for both civilian employees and military personnel.

SECNAVINST 5100. 10G, *Department of the Navy Policy for Safety, Mishap Prevention and Occupational Health Programs,* delegates the authority for the operational aspects of the NAVOSH Program to the Chief of Naval Operations (CNO). The CNO's responsibility includes issuing directives to enact program policies and defining specific safety standards and criteria.

SAFETY POLICY

The Navy's policy is to enhance operational readiness and mission accomplishment by establishing an aggressive occupational safety and health program. This program reduces occupational injuries, illnesses or deaths, and material loss or damage. It also maintains safe and healthy working conditions for personnel. The program addresses the elimination or control of hazards that can result in injury or death. The occupational health aspects concern the effects of long-term exposures to toxic chemicals and harmful physical agents (for example, noise, heat, and radiation). The occupational health aspects involve the monitoring and treatment of work-related injuries and illnesses as well.

Each safety program, whether it concerns safety afloat, ashore, or in aviation, uses the chain of command to carry out the program. Safety programs apply to all military and civilian personnel (including off-duty military personnel). In addition to personnel, the program also applies to material afloat and ashore, on and off naval installations. The program requires Navy dependents and all other civilian personnel while embarked in naval ships or aircraft or while on naval shore installations to follow program directives.

The CNO is responsible for implementing the safety and occupational health programs. The largest of these programs is the NAVOSH Program. The NAVOSH Program addresses the maintenance of safe and healthful conditions in the workplace or the occupational environment. It applies to all Navy civilian and military personnel and operations ashore or afloat. OPNAVINST 5100.23C, *Navy Occupational Safety and Health (NAVOSH) Program Manual,* is the basic NAVOSH document used to carry out the program. It refers to both afloat and shore commands. However, many unique and specific situations are associated with forces afloat as well as the aviation community. For that reason, the NAVOSH information for forces afloat was separated into the *Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat,* OPNAVINST 5100.19B. *Afloat Safety Program,* OPNAVINST 5100.21B, directs forces afloat to use OPNAVINST 5100.19B for specific safety standards. OPNAVINST 3750.6Q, *The Naval Aviation Safety Program,* is the reference for safety within the aviation community. These instructions are discussed in later chapters.

SAFETY IN TODAY'S MODERN NAVY

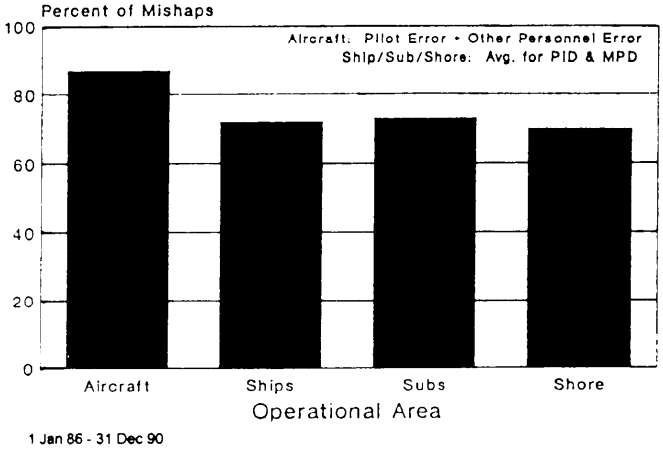
> The objective of the safety program is to enhance operational readiness by reducing the number of deaths and injuries to personnel and losses and damage to material from accidental cause.
>
> –OPNAVINST 3120.32C, *Standard Organization and Regulations of the U.S. Navy*

Before we go any further, let us define some terms you will see throughout this chapter and book. We define **safety** as freedom from danger, risk, or injury. An unplanned event or a series of events that results in injury, death, or material damage is a **mishap.** A **hazard** is an unsafe or a dangerous condition that may exist before a mishap occurs. We measure a hazard according to its **severity** and **probability** of creating a mishap.

The overall objective of the NAVOSH Program is mishap prevention. If a mishap occurs, we provide for investigation of that mishap to prevent recurrence. Mishap prevention involves identifying a hazard; evaluating the hazard; and correcting, controlling, or eliminating that hazard. Training is a critical element of mishap prevention. Safety supervisors play a critical role in mishap prevention and hazard awareness and identification.

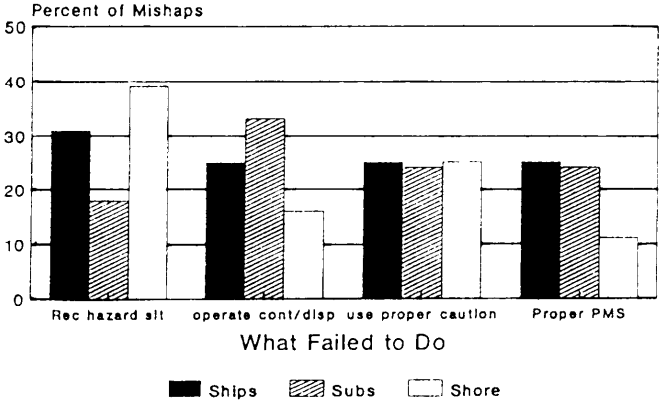
Most mishaps are preventable. However, through ignorance or misunderstanding, many people have the common belief that mishaps are the inevitable result of unchangeable circumstances or fate. That belief is untrue because it fails to consider the basic law of "cause and effect" to which mishaps are subject. Thus, mishaps do not occur without a cause. Few mishaps are the result of material failure or malfunction; most mishaps are the direct result of some deviation from prescribed safe

Estimated Frequency of Mishaps
Involving Personnel Error



1 Jan 86 - 31 Dec 90

What Responsible Person Failed to Do
that Caused Material Property Damage



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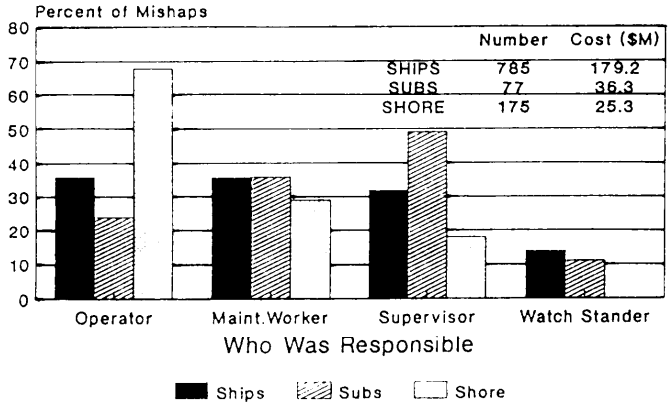
Distribution of Responsibility for
Material Property Damage



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What Responsible Person Failed to Do
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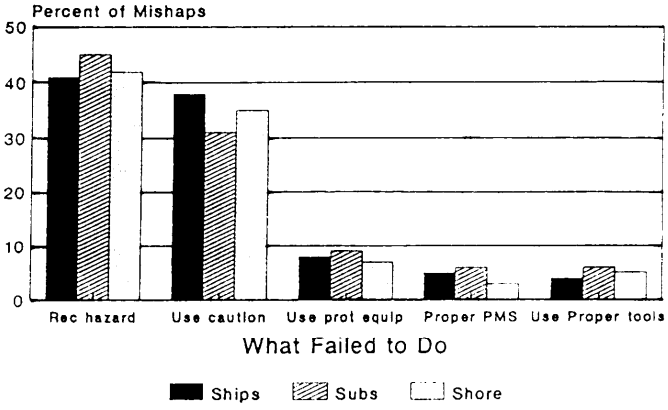

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Distribution of Responsibility for
Personal Injuries/Death

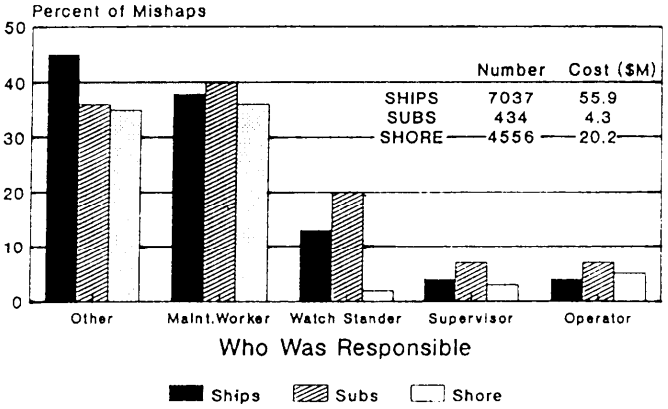

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Figure 1-1.—Human error mishap statistics.

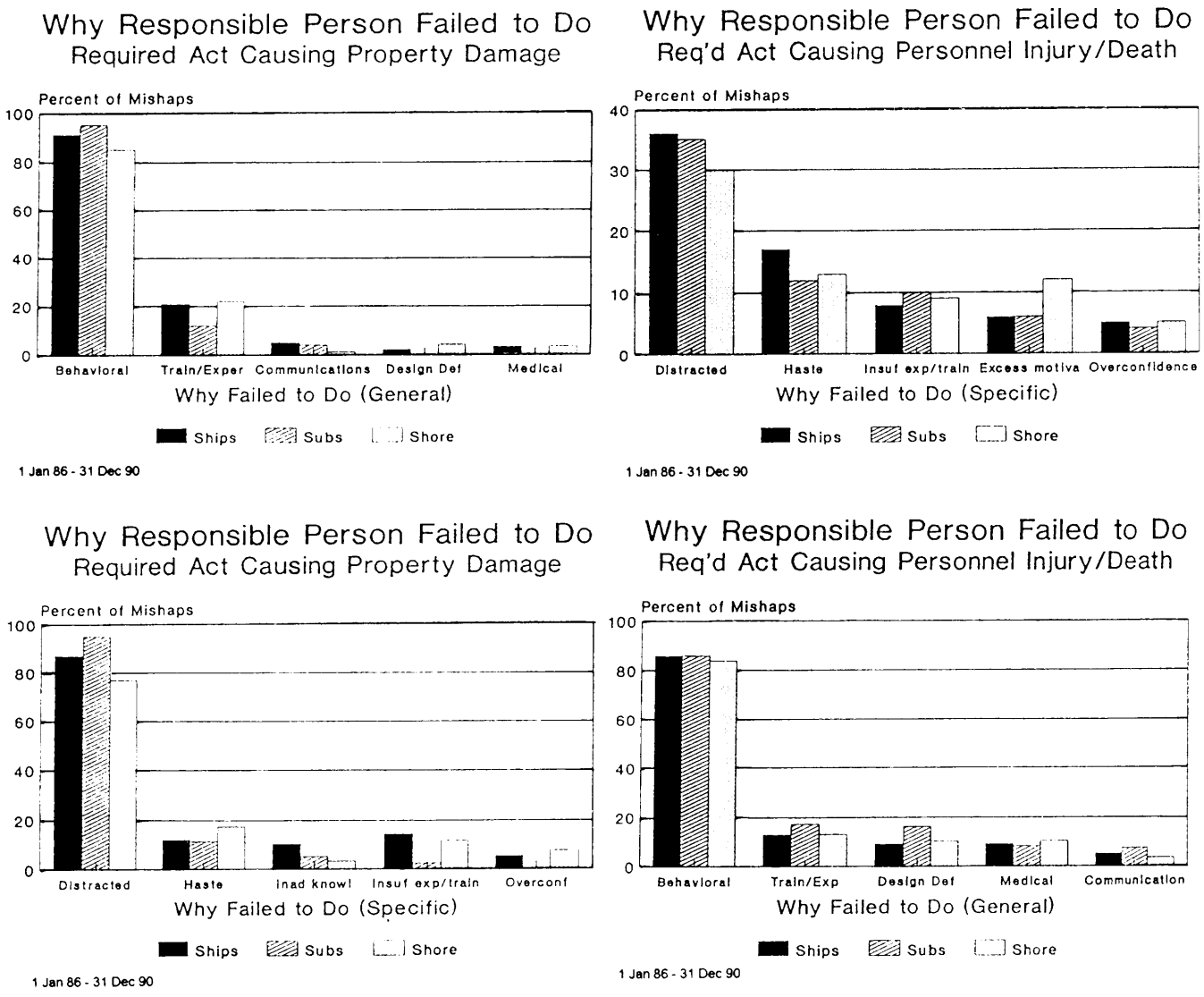

Figure 1-1.—Human error mishap statistics—Continued.

operating procedures. **Human error** is cited as the **most frequent** cause of Navy mishaps (fig. 1-1).

How do we keep personnel and working conditions as safe as possible? We include safety rules in our everyday workplace. One purpose of safety rules is to remind people of the inherent dangers of their work. Your job as a safety supervisor will require you to identify hazards and apply appropriate or required safety rules. Training personnel to observe safety precautions helps them avoid preventable mishaps, maintain a safe work environment, and conduct mishap-free operations. Operating procedures and work methods that include mishap prevention keep personnel from being needlessly exposed to injury or occupational health hazards. An effective safety program depends on worker cooperation and supervisor involvement.

THE NAVAL SAFETY CENTER

The Navy recognized the need for centralized management of all safety efforts many years ago. A single command to deal with all Navy safety ashore and afloat evolved from the original Naval Aviation Safety Center. With the passage of the Occupational Safety and Health Act (OSHA) in 1970, increased emphasis on shore and shipboard safety demanded expansion and increased awareness.

Commander, Naval Safety Center (COMNAVSAFECEN), advises and assists the CNO in promoting, monitoring, and evaluating the Department of the Navy safety program. The commander advises and assists the CNO in determining safety program goals and policies. COMNAVSAFECEN also has the responsibility of

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Figure 1-2.—Naval Safety Center building.

developing procedural guides and preparing directives to support and achieve program goals and policies.

RESPONSIBILITIES OF THE NAVAL SAFETY CENTER

The Naval Safety Center (fig. 1-2), located in Norfolk, Virginia, provides staff support to the CNO in executing the Navy safety program. The Safety Center also provides staff support to the Deputy Chief of Naval Operations (Logistics), N4. The staff support helps N4 carry out its overall Navy safety and occupational health coordination responsibilities. The Safety Center supports the Naval Inspector General and the President of the Board of Inspection and Survey.

As directed, the Naval Safety Center assists N4 in preparing and maintaining basic safety program manuals. The Safety Center does not issue Navywide safety directives. However, when requested, the staff helps the appropriate offices, commands, or agencies prepare general or specific safety-related operating instructions. It also conducts safety surveys of the naval operating forces and shore commands as requested by the CNO.

1. Other functions performed by the Naval Safety Center include:

2. Maintaining liaison with naval command bureaus, and offices to ensure knowledge of factors adversely affecting safety and to recommend remedial action

3. Maintaining liaison with other government agencies and private organizations engaged in hazard awareness

4. Maintaining a library of research, technical development, and survival information

5. Maintaining and evaluating mishap, occupational illness, and hazard reports; and publishing statistical data on mishaps

6. Providing mishap statistical research services and conducting special analytical studies on naval mishap data

7. Identifying human factors, inadequate maintenance techniques, deficiencies in design, insufficiency of technical publications, and shortage of repair parts and equipage

8. Developing and reviewing procedures and standards for conducting mishap investigations; assisting in investigations of significant mishaps involving naval aircraft, ships, and submarines; taking part, as requested, in

significant, nonaircraft mishap investigations occurring ashore

8. Representing or sponsoring conferences, symposia, seminars, and work and study groups to further the Department of the Navy mishap prevention programs
9. Promoting interest in mishap prevention through hazard awareness
10. Taking part in all aspects of Navy safety education and training
11. Providing, when directed, membership on review boards and advisory councils such as the Naval Aviation Training and Operations (NATOPS) Advisory Council and the CNO Ammunition and Hazardous Materials Review Board (AMHAZ)
12. Developing and providing a Motor Vehicle Mishap Prevention Program directed to Navy personnel on and off duty and all on-duty civilian personnel who use government or privately owned vehicles; developing traffic safety training courses
13. Managing the Individual Flight Activity Reporting System (IFARS) and maintaining flight time data for all aeronautically designated naval officers
14. Developing and administering safety award programs and recommending final selection of winning units
15. Reviewing and evaluating selected system safety engineering requirements on new systems or major systems changes
16. Maintaining a recognized data repository covering each dive made by U.S. Navy divers and providing information based upon analysis of this data; conducting divers' safety surveys and inspections, and publishing information concerning diving safety to forces afloat
17. Making appropriate and timely recommendations to the Chief of Naval Operations, Commandant of the Marine Corps, or other subordinate commands on remedial actions required in the interest of readiness through safety

Unless otherwise directed, the Safety Center's responsibilities do not include safety related to nuclear propulsion and nuclear weapons.

The Naval Safety Center receives and analyzes all mishap and injury reports submitted by aviation, ship, submarine, and shore commands. The staff indexes this information by phase of operation, material failure, personnel action, or cause factors. It then incorporates the information into the mechanized data bank, through which it can retrieve the mishap and injury records of any specific incident. In that way, the Naval Safety Center can monitor mishap trends and pinpoint areas requiring corrective action. Additionally, the Naval Safety Center maintains operational or exposure data such as the Individual Flight Activity Report and the Diving Log. It uses data from those documents with mishap data to determine the significance of factors involved in mishaps.

The Naval Safety Center conducts safety surveys upon the request of a unit's commanding officer. The purpose of each survey is to identify and analyze hazards and potential mishap situations to determine preventive action. The Naval Safety Center provides a team of officers and chief petty officers to conduct surveys. These personnel are experts in their fields, and most have been associated with mishap prevention for several years. The survey is informal. Only the commanding officer of the unit involved, and not superiors in the unit's chain of command, receives the survey results. The Naval Safety Center enters the results into its data base to help analyze and predict potential mishap areas. It also conducts safety surveys of high risk courses at training commands.

The Naval Safety Center also guides the incorporation of mishap prevention "lessons learned" with new construction and conversion for shipboard improvement and system safety. The center uses the safety recommendation (SAFEREC) system, ship safety information data base, and mishap and injury reports. In addition, it uses casualty reports (CASREPs) and maintenance data system (MDS) reports submitted according to the 3-M system. The center uses these data to recommend improvements in shipboard and system safety.

SAFETY PERIODICALS PUBLISHED BY THE NAVAL SAFETY CENTER

The Naval Safety Center advises and informs the operating forces, shore commands, and other

Figure 1-3.—Naval Safety Center publications.

commanders on mishap prevention through the following periodicals (fig. 1-3):

Approach, the Naval Aviation Safety Review, is published monthly for the professional benefit of all levels of **naval aviation.** It contains articles, commentaries, and short features about mishap prevention as well as articles about flight operations.

Fathom, the Afloat Safety Review, is published every other month for the professional benefit of all hands. It presents the most accurate information available on **surface ship and submarine mishap prevention.**

Mech, the Naval Aviation Maintenance Safety Review, is published bimonthly for the **naval aviation maintenance** community.

Safetyline, the Naval Safety Journal, presents information available on various **shore safety** subjects. These subjects include environmental and occupational safety, hazardous material, recreation, athletics, home safety, motor vehicle safety, ordnance safety, and occupational health. *Safetyline* is published six times a year.

Ships Safety Bulletin contains articles on **shipboard safety** problems, trends, mishap briefs, and statistics. Although it is published monthly, it is occasionally published as a special issue on one topic.

FLASH contains factual lines about submarine hazards. It is a monthly, mishap-prevention bulletin that provides a summary of research from selected reports of **submarine hazards.** It gives advance coverage of safety-related information.

Aviation Safety Bi-Weekly Summary of **aircraft mishaps** provides aviation mishap briefs, statistics, discussions, and safety tips. The Naval Safety Center sends this message summary every other week.

Diving Safety Lines is a mishap-prevention publication that provides a quarterly summary of research from selected **reports of diving hazards.**

The Naval Safety Center also sends out a biweekly message summary of mishaps. This summary can be published in the Plan of the Day, issued as general information, or used as training material.

OTHER PUBLICATIONS PUBLISHED BY THE NAVAL SAFETY CENTER

In addition to the periodicals listed above, the Naval Safety Center also publishes the following materials:

- Posters concerning the drive-safe program and general, aviation, submarine, and surface ship safety
- Stickers informing people of foreign object damage (FOD), tower signals, and other topics
- Safety inspection checklists
- Naval Safety Center advisories
- Summaries of mishaps
- Safety program management guides
- Safety equipment shopping guides
- Mishap investigation handbooks

Additionally, higher authority distributes information to the operating forces through other publications and periodicals.

SAFETY CHAIN OF COMMAND

The Chief of Naval Operations (Environmental Protection, Safety, and Occupational Health Division), N45, sets policy and establishes safety standards for the NAVOSH Program. N45 carries out the policies of the *NAVOSH Program Manual,* OPNAVINST 5100.23C, and *NAVOSH Program Manual for Forces Afloat,* OPNAVINST 5100.19B. N45 maintains close liaison with other agencies within the Office of the Chief of Naval Operations (OPNAV) to provide safety and occupational health standards for surface ships, submarines, and aviation commands.

OPNAVINST 5100.23C specifies the proper chain of command and responsibilities for the NAVOSH program. Ashore and afloat, all activities, commands, commanders, commanding officers, and officers in charge must carry out an effective safety and occupational health program. Administrative responsibility for safety extends from SECNAV to CNO to Commander in Chief, Atlantic Fleet (CINCLANTFLT) and Commander in Chief, Pacific Fleet (CINCPACFLT) for shore and afloat commands.

The CNO provides primary support for the NAVOSH Program. The various systems commands, the Naval Safety Center, Chief of Naval Education and Training, and the Navy's Inspector General provide specified support. Type commanders and afloat group and squadron commanders ensure their subordinate units carry out an effective safety and occupational health program.

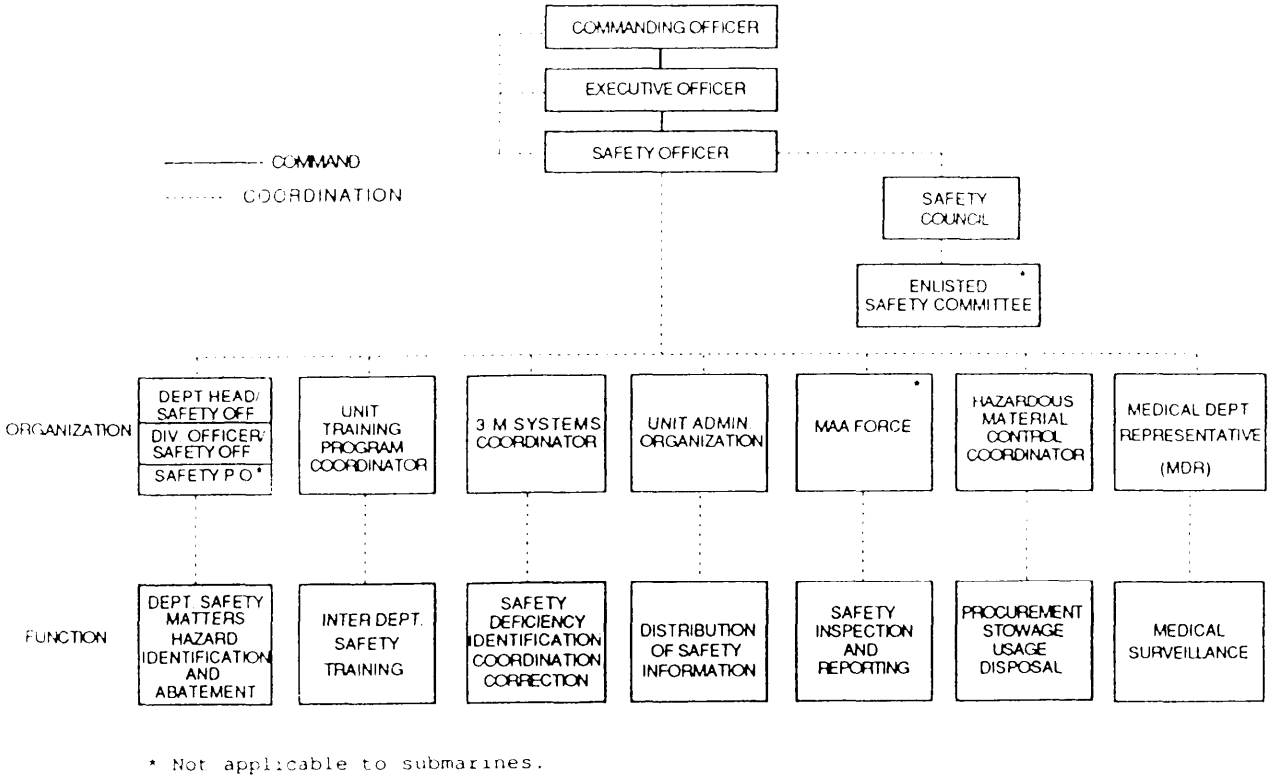

Figure 1-4.—Typical afloat safety organization.

RESPONSIBILITIES FOR THE LOCAL SAFETY PROGRAM

The chain of command manages the local safety program, since that is a command responsibility. Each command level and supervisory level has responsibilities for supervising both routine and specialized tasks.

The commander, commanding officer, or officer in charge has ultimate responsibility for safety matters within his or her unit. He or she appoints a safety officer or safety manager to help carry out day-to-day safety-related activities. The duty of the safety officer or safety manager is to make sure all personnel understand and strictly enforce all prescribed safety precautions.

Afloat, the safety organization extends from the commanding officer down to the most junior sailor. Each department and division on board ship has safety program responsibilities. Ashore, although bases and tenant commands are staffed with military or civilian safety professionals, the safety organization includes every worker.

AFLOAT SAFETY ORGANIZATION

U.S. Navy Regulations charges commanding officers with absolute responsibility for the safety, well-being, and efficiency of their commands. The surface ship or submarine safety officer reports directly to the commanding officer on safety matters. The safety officer reports to the executive officer about administrative matters. The safety officer assignment may be a primary or collateral duty, depending on the type of ship and its size.

The commanding officer assigns a collateral duty safety officer on all submarines and surface ships with a crew of less than 500 personnel. All aircraft carriers; amphibious assault ships—general purpose (LHA), multipurpose (LHD), and helicopter (LPH); and fast combat support ships (AOEs) assign a line officer as the primary duty safety officer. Repair ships (ARs), destroyer tenders (ADs), and submarine tenders (AS) assign an industrial hygiene officer as the primary duty safety officer. Aircraft carriers—both multipurpose (CVs) and nuclear propulsion (CVNs)—assign an industrial hygiene officer as the assistant safety officer. Readiness groups and squadrons serve in a primary duty billet as the staff safety officer.

Whether a safety officer assignment is a primary or collateral duty, it should not be taken lightly. The assigned safety officer should be of department-head status and have the seniority to get the job done. Safety petty officers assigned to assist the safety officer must be E-5 or above. Figure 1-4 shows a typical afloat safety organization.

The safety officer, guided by the commanding officer, formulates and manages a safety program. The guidelines stated in OPNAVINST 5100.21B and OPNAVINST 5100.19B are the basis for the program. The safety officer checks the crew's activities and provides the coordination for keeping the program viable and visible to all hands.

The chain of command, which includes department and division safety officers, division safety petty officers, the master-at-arms (MAA) force, and the medical department, monitors the safety program. It informs the commanding officer of the command's progress in reaching mishap prevention goals and of the safety program's effectiveness. For example, under the guidance of the safety officer, safety organization personnel accomplish the following:

- Monitor mishap prevention standards by investigating all mishaps and near mishaps
- Evaluate the effectiveness of the safety program by analyzing internal and external reports including CASREPSs; binnacle lists; safety related messages; mishap and near mishap investigations; and various surveys, inspections, and zone inspections
- Coordinate distribution of safety information including lessons learned from official and nonofficial sources
- Coordinate shipboard training in general mishap prevention, especially for newly reported personnel
- Ensure commands prepare and submit occupational injury and illness reports to NAVSAFECEN based on OPNAVINST 5100.21B
- Perform trend analysis of injury and illness data
- Follow-up on reports of unsafe and unhealthful conditions as specified in OPNAVINST 5100.19B
- Track corrective action on safety and health items
- Maintain liaison with other commands and NAVSAFECEN in matters of mishap prevention
- Coordinate traffic and motor vehicle safety training
- Coordinate recreational and off-duty safety training

The commanding officer ensures personnel are instructed and drilled in applicable safety precautions and requires the posting of adequate warning signs in dangerous areas. He or she then establishes a force to see that the precautions are being observed.

The Safety Officer

The safety officer is assigned administratively to the executive officer. However, the safety officer has direct access to the commanding officer in matters of safety. Normally, the safety officer has department-head status and seniority and is responsible for carrying out a comprehensive safety program. Objectives established by the commanding officer serve as the basis for this program. OPNAVINST 5100.19B and OPNAVINST 5100.21B outline the duties and responsibilities of the safety officer. The safety officer's responsibilities include the following:

- Acting as the principal advisor to the commanding officer on shipboard safety matters
- Promoting maximum cooperation in safety matters at all levels
- Ensuring wide distribution of safety information
- Monitoring the submission of required safety reports to ensure accuracy and timeliness
- Maintaining appropriate safety records and statistics
- Ensuring the program is evaluated and monitored
- Participating in mishap investigations and protecting mishap site evidence for mishap investigation boards
- Serving as the senior member of the Enlisted Safety Committee
- Serving as recorder for the Safety Council

The safety officer works with all department heads and division safety officers and petty officers in carrying out the safety program in their areas.

Department Heads

The department head is the designated department safety officer. He or she coordinates the department safety program with the command safety officer. The department safety officer acts as a point of contact for coordinating and evaluating the ship's safety program. Further, the department safety officer ensures the correction of all hazardous conditions revealed by safety hazard reports. He or she maintains records of mishaps, safety hazards, and safety training within the department and maintains direct liaison with the unit safety officer. The department head is also a member of the Safety Council.

Division Officers

Each division officer is assigned as the division safety officer. He or she advises the department safety officer on the status of the safety program within the division. That includes the status of any safety-related item revealed through the 3-M Systems. An example would be noncompliance with or a deficiency in the planned maintenance system (PMS). He or she also advises the department safety officer of any safety training needs within the division and ensures that assigned personnel are properly trained for their billet. The division officer appoints an E-5 or above to serve as the division safety petty officer.

Division Safety Petty Officers

The division safety petty officer must become thoroughly familiar with all safety directives and precautions that apply to his or her division. He or she conducts assigned division mishap prevention training and maintains appropriate records. The division safety petty officer assists in safety investigations as directed and makes recommendations about the safety program. Further, the safety petty officer helps the division officer execute safety duties. He or she acts as the technical advisor on matters of mishap prevention within the division. The division safety petty officer is the division's representative to the Enlisted Safety Committee. Submarines are not required to assign division safety petty officers.

All shipboard safety petty officers must complete the division safety petty officer's "Watchstation" section of the *Personnel Qualification Standard (PQS) Safety Programs Afloat,* NAVEDTRA 43460-4A, within 6 months of assignment. At least 50 percent of the ship's safety petty officers must also attend the Safety Program Afloat course, J-493-2099.

Medical Department Representative

The medical department representative provides direct support to the ship's NAVOSH Program. He or she provides or schedules medical surveillance services, such as hearing tests; arranges for outside industrial hygiene assistance; and maintains occupational health records. The medical department representative provides the safety officer with injury reports.

The Master-at-Arms/Safety Force

Master-at-arms (MAA) force personnel serve as the ship's safety force, assisting the safety officer in program enforcement and hazard identification. During their *routine* inspections, MAA personnel identify and report *routine* hazards and carry out a system of internal reporting to focus attention on the safety program.

Safety Council

The ship's Safety Council convenes quarterly to develop recommendations for policy in safety matters and to analyze progress of the overall safety program. The council consists of the commanding officer or executive officer (chairperson), the unit safety officer (recorder), and safety representatives from each department.

The safety officer may prepare an agenda for the chairperson's issuance before each meeting. This information should show the extent of any problems and suggested approaches to resolving the problems. The council reviews reports from the medical department representative and statistics compiled by the safety officer. In addition, it reviews inspection reports and safety-related directives and messages from higher authority. The safety council also performs the following duties:

- Reviews statistics compiled by the safety officer from mishap/near mishap reports, inspection reports, and other information
- Directs action to be taken to correct identified unsafe or unhealthful conditions
- Evaluates the ship's NAVOSH Program
- Reviews issues and recommendations submitted by the Enlisted Safety Committee

The safety officer keeps records of the Safety Council meetings and issues the minutes.

Enlisted Safety Committee

The Enlisted Safety Committee makes recommendations about the command's safety program to the Safety Council. The safety committee convenes to exchange information; improve communications; review conditions, mishaps, and injuries; and suggest improvements. It makes written safety recommendations to the Safety Council and the commanding officer. These meetings convene at least quarterly to enhance interdepartmental communication in mishap prevention at division and work center levels. Committee membership is as follows:

- Command safety officer (senior member)
- Division safety petty officers
- Chief master-at-arms

On small ships, with less than 300 crewmembers, the Enlisted Safety Committee may be incorporated into the Safety Council. Since submarines are not required to appoint safety petty officers, they are not required to have an Enlisted Safety Committee.

Individual Crewmembers

Safety program success depends on all-hands cooperation and support. The best safety program cannot prevent mishaps if the crew does not comply with safety precautions. All hands must follow posted safety precautions, comply with safety standards, and report unsafe or unhealthful conditions. They must report injuries and material damage immediately to their supervisor.

Safety Department Organization

Ships with a primary duty safety officer will have a safety department. This department, headed by the safety officer, may have an assistant safety officer and other safety assistants assigned. Aircraft carriers have an aviation safety officer, usually a Commander, assigned as department head and an industrial hygiene officer assigned as the assistant safety officer. A carrier may have 5 to 10 additional safety assistants assigned, depending on its size and requirements. Large air-capable surface ships (LHDs, LHAs, and amphibious transport docks [LPDs]) normally have a lieutenant or lieutenant commander assigned as the aviation safety officer, with one to three assistants. Tenders have an industrial hygiene officer assigned as the safety officer, with one to five safety assistants. Safety department manning varies between ships. During some special events, such as overhauls or deployment, the ship may assign additional personnel to the safety department.

SHORE ACTIVITY SAFETY ORGANIZATION

The goal of any safety program is to enhance operational readiness. We enhance this readiness by reducing the frequency and severity of on- and off-duty mishaps to personnel. In addition, we must reduce the cost of material and property damage attributed to mishap causes. How do we do that? We must instruct each person in the command on general safety precautions. These precautions include mishap prevention and instructions on special hazards found in the daily work environment. We must also ensure continuing action and command interest in mishap prevention. Finally, we must evaluate the effectiveness of the program.

Echelon-Two Commands

Within echelon-two commands, such as BUMED, Naval Sea Systems Command (NAVSEA), and Naval Air Systems Command (NAVAIR), authority and responsibility for performing the staff NAVOSH functions are under a separate Occupational Safety and Health (OSH) office. A civilian safety professional heads the OSH office and reports directly to the commander of the systems command. The civilian safety professional's duties are similar to those of the afloat safety officer in providing safety information and evaluations for the staff. The OSH office may also serve as technical advisor to the CNO on NAVOSH-related matters.

Shore Activity OSH Offices

Each shore activity must establish and staff an OSH office. The OSH manager is placed on the immediate staff of the commander, commanding officer, or director or officer in charge. The minimum requirements for all OSH offices include the following:

- OSH Program management
- OSH reviews and inspections
- Deficiency abatement
- Consultation
- Investigation and reporting of mishaps

- Employee hazard reports
- Analysis of OSH Program effectiveness
- Attendance and conduction of OSH council and committee meetings
- OSH training, promotion, and education
- Implementation of NAVOSH Program requirements, depending on industrial activity at the shore command

Civilian staffing is based on the number of employees at the shore activity and tenant commands and on the extent of industrial activity. OPNAVINST 5100.23C discusses this staffing. This instruction also addresses occupational health medical staffing and industrial hygiene support. If a number of small bases are located in the same area, the OSH office may be consolidated and advise smaller commands through a services agreement.

Military commands at a shore activity may have a collateral duty safety officer assigned. This safety officer reports directly to the commander, commanding officer, or officer in charge for safety matters. Staffs, such as type commanders and support activities, may have both a military and civilian assigned as safety officer and OSH manager. If you are the collateral duty safety officer for your shore command, you may be dealing with the consolidated or base OSH office on a regular basis. You may consult the OSH manager or civilian staff of safety professionals concerning the program at your facility.

Aviation squadrons ashore have a military collateral or primary duty aviation safety officer assigned. That safety officer is assisted by aviation safety petty officers assigned to each division within the squadron. This safety organization remains in effect when the squadron deploys aboard ship or to remote shore stations. The base or naval air station OSH office maybe involved in the safety program as it pertains to the squadron's hangers and facilities.

Shore OSH Councils and Committees

OSH councils and committees serve as sounding boards for multiple viewpoints and interests of various groups and individuals on matters relating to the NAVOSH Program. The OSH councils and committees have three basic functions:

- To create and maintain an active interest in occupational safety and health
- To serve as a means of communication regarding occupational safety and health
- To provide program assistance to commanding officers, including proposing policy and program objectives

The Federal Advisory Council on Occupational Safety and Health (FACOSH) acts in an advisory capacity to the Secretary of Labor. The council consists of 15 members appointed by the Secretary and includes representatives of federal agencies and of labor organizations representing employees. Field FACOSHs exist in many metropolitan areas; local Navy officials serve on this council. There is also a Department of Defense (DOD) Safety and Occupational Health Policy Council and a CNO Safety and Occupational Health Working Group (SOHWG). OSH councils, composed of both civilian and military members, may be established at major command headquarters.

At the activity level, Navy commands establish OSH councils, which meet at least quarterly. The commanding officer or executive officer chairs these councils. Members are appointed by local directive and include key safety professionals, military and civilian. OSH office representatives from each command, military collateral duty safety officers, aviation safety officers, and civilian employee representatives may be included in the membership.

Shore activities should also organize additional OSH committees at the supervisory or shop level. Provisions are made for their input to the OSH council. As a safety supervisor, you maybe involved in the OSH committee or the OSH council, depending on the size and function of the shore activity sponsoring the OSH council.

AVIATION SAFETY PROGRAM ORGANIZATION

We will now discuss the various responsibilities for the command aviation safety program.

Commanding Officer

The commanding officer of an activity appoints an aviation safety officer as specified in the *Standard Organization and Regulations of the U.S. Navy,* OPNAVINST 3120.32C. This instruction lists the responsibilities of the command and dictates how the commanding officer should establish the program within the command.

Aviation Safety Officer

The aviation safety officer (ASO) acts as principal advisor to the commanding officer on all aviation safety matters. He or she advises and aids the commanding officer in setting up and managing a command aviation safety program. The ASO is responsible for providing safety education throughout the command. He or she also ensures the incorporation of safety standards and procedures into all activity functions. The ASO coordinates safety matters among the organization staff. He or she maintains appropriate aviation safety records and mishap statistics. The ASO must be a primary billet assignment.

The aviation safety officer works with Quality Assurance/Analysis (QA/A) division personnel to develop a local maintenance instruction (MI) or command type of instruction. The ASO and QA/A division personnel investigate most mishaps/incidents and hazards in their activity.

A description of the command safety organization and tasks or functions of each member of the command safety organization must be issued. The flight surgeon or wing flight surgeon serving the command is responsible for the aeromedical aspects of the command safety program.

Aviation Safety Council

If the command is a squadron, an air station, or larger, the command must form an aviation safety council. The council sets goals, manages assets, and reviews safety-related recommendations. The council keeps records of the meetings held. Members of the council review command plans, policies, procedures, conditions, and instructions to make sure they are current and correct. The council also responds to corrective recommendations. Standing members of the council include ground, aviation, and aeromedical (flight surgeon) safety officers.

Enlisted Aviation Safety Committee

Representatives from each work center and other designated activities, such as the Medical Department and Aircraft Intermediate Maintenance Department (AIMD), form the Enlisted Aviation Safety Committee. The committee meets once a month to discuss safety deficiencies and to provide recommendations for improved safety practices and promotion of safety awareness. The committee keeps a record of attendance and of subjects discussed at the meetings. The commanding officer makes a timely response in writing to all recommendations of the committee.

SAFETY TRAINING

Training is a vital part of every effective safety program. The goal is to promote hazard awareness and to integrate safety into all unit training. An important task supervisors have is educating personnel within a division. Proper safety training will help all hands become effective safety monitors. Remember, one person cannot ensure safe working habits and conditions. You need an all-hands effort to achieve mishap-free working conditions.

The command's training program, and each departmental training program, should include a systematic approach to promote mishap prevention, both in unit and off-duty activities. Make effective use of educational materials from outside sources. These materials include Navy training films, safety notes, and various publications issued by the Naval Safety Center. Use these resources as aids in training. Display as many of these resources as applicable in division workspaces. That will increase personnel interest in safety.

Training in some OSH topics is mandatory, either as an indoctrination or periodically. OPNAVINST 5100.23C outlines the NAVOSH training requirements for shore activities. OPNAVINST 5100.19B defines indoctrination and annual NAVOSH training requirements for a ship's force. The *NAVOSH Training Guide for Forces Afloat,* NAVEDTRA 10074, provides onboard training materials as well as lists of training aids and formal safety courses for most required training.

The safety officer or safety manager ensures safety training is conducted. Frequently, the safety supervisor, work center supervisor, or safety petty officer conducts on-the-job or general military training (GMT). If these safety professionals do not actually conduct the safety training, they should at least monitor it for effectiveness.

All military and civilian workers must be introduced to the NAVOSH Program during indoctrination. Workers are made aware of the specific hazards in their work areas and general safety precautions. Additional training may be required for special evolutions such as the following:

1. Preparation for shipyard overhaul
2. Getting under way after a long in-port period
3. Seasonal weather changes or unusual weather
4. Unusual missions or operations

5. Increased industrial activity

6. After a serious mishap

TYPES OF SAFETY TRAINING

Safety training is accomplished through **on-the-job training, general military training, indoctrination training, formal safety courses, safety standdowns,** and **safety surveys.** The command training officer schedules required safety training, such as GMT and indoctrination. This training then becomes part of the command training plan. Safety professionals and safety supervisors must attend formal safety courses as part of their assignment. Safety standdowns consist of periods, usually of 1 or 2 days, of intensive safety training and awareness.

On-the-Job Training

Training, cross-training, and qualifying for specific skills require the use of proper safety precautions. Safety precautions are a part of all standard operating procedures (SOP).

By monitoring safety precautions during routine work situations, you can detect unsafe practices. Once detected, you can take immediate action by providing training to correct those practices.

Monitoring of on-the-job safety practices serves as an evaluation of the training provided by supervisory personnel. It checks the effectiveness of training in all aspects of everyday life aboard your command. Those aspects include the planned maintenance system (PMS), weapons systems operations, damage control, fire fighting, and general housekeeping. Mishap trends also help target needed mishap prevention training.

General Military Training

Routine, shipboard general military training (GMT) must include safety topics. Aboard ship, the Planning Board for Training meets periodically to schedule training and ship's evolutions. The safety officer must ensure safety topics, especially the topic of required annual safety training, are included in the command training plan. General military training (GMT) can be accomplished through video tapes, stand-up lectures, drills, or a combination of methods. Training should be monitored and documented. Ashore, military personnel should also receive safety topic training as part of their regularly scheduled GMT.

Indoctrination Training

All new workers or sailors receive some type of indoctrination training to help them become familiar with their new job. Aboard ship, that is accomplished through Indoctrination Division, School-of-the-Ship, or submarine Phase I training. New worker indoctrination must include safety topics.

OPNAVINST 5100.23C and OPNAVINST 5100.19B require indoctrination training on the command's overall NAVOSH Program. Federal Hazard Communication Standard training is required for all shore personnel who will be in contact with hazardous materials. Aboard surface ships, indoctrination training is required on back injury prevention, gas-free engineering, electrical safety, the tag-out program, and the radiation safety program.

Formal Safety Courses

A variety of formal safety courses are provided for Navy safety professionals. All safety officers and one-half the safety petty officers assigned aboard ship must take part in formal safety training. Civilian safety managers must attend formal courses and refresher training. OPNAVINST 5100.23C and OPNAVINST 5100.19B provide course requirements. The Naval Safety School in Norfolk, Virginia, provides numerous shore safety courses. Fleet Training Centers in Norfolk and San Diego conduct safety supervisor and hazardous material training. The Surface Warfare Officer School in Newport, Rhode Island, presents the Afloat Safety Officer course. Submarine training facilities in Norfolk and Pearl Harbor conduct the Submarine Safety Officer course.

Safety Standdowns

In 1989, in response to a rash of Navy mishaps, the Chief of Naval Operations called for a Navywide safety standdown. A safety standdown is a period, usually of 1 or 2 days, set aside for safety training, awareness, and drills. Type commander instructions require afloat units to conduct safety standdowns at least once a year, while yearly standdowns are recommended to other units. Shore commands may also take part in safety standdowns. A standdown may be called any time the command notes a particular safety problem or wants to reemphasize safety on a specific topic. For example, if a command has a serious mishap, it may have personnel take part in a safety standdown for a morning instead of working. Personnel may then review the events leading to the mishap and discuss the lessons learned.

Safety Surveys

Safety surveys are informal safety program evaluations conducted by the Naval Safety Center. These surveys are excellent training opportunities for safety supervisors. Checklists are used to determine safety requirements for each discrepancy. Shore, surface ship, submarine, and aviation safety surveys are available upon request from the Naval Safety Center. The results of safety surveys are provided directly to the commanding officer or commander, but to no one else in the chain of command.

Video Tapes and Training Aids

Video tapes, films, and other visual training aids are good supplements to your safety training program. They should be used in conjunction with lectures or discussions. Since many young people are media-oriented, video tapes and films capture their attention. However, video tapes and films should never be used as a substitute for a monitored presentation.

Naval Education and Training Support Centers on each coast maintain libraries from which you may order training films. The addresses and phone numbers of those libraries are as follows:

Naval Education and Training Support Center, Atlantic
Code N5, Bldg. W313
Naval Station, Norfolk, VA 23511-6197
Phone (804) 444-4011/1468,
Defense Switched Network (DSN)
564-4011/1468

Naval Education and Training Support Center, Pacific
921 West Broadway
San Diego, CA 92132-1360
Phone (619) 532-1360, DSN 522-1360

Catalog of Navy/Marine Corps Audiovisual Productions, OPNAV P-09B1-01-88, and *NAVOSH Training Guide for Forces Afloat,* NAVEDTRA 10074, provide a list of safety training films. In some instances, you may borrow training aids from industrial hygiene or occupational health departments at medical clinics or naval environmental and preventive medicine units (NEPMUs).

Training aids for submarine force units are listed in the *Submarine On-Board-Training (SOBT) Products Catalog*. The catalog is available through COMSUBGRU-2, Code N-24, Naval Submarine Base, New London, CT 06349-5100, commercial (203) 449-3485 or DSN 241-3485. SOBT distributes safety video tapes for permanent retention by submarine force units.

NAVOSH training topic video tapes are distributed to each afloat unit. These tapes are accompanied by a NAVOSH video tape user's guide. The user's guide explains the purpose of and provides an introduction to the video tape.

BEING AN EFFECTIVE SAFETY TRAINER

The work center or area supervisor is an important link in the Navy's safety training program. These supervisors are responsible for specific training sessions, including monthly 5-minute stand-up training lectures. The success of training depends on the vigor and leadership demonstrated by the supervisor. The supervisor has the practical experience on the job to teach safety skills. But first, the supervisor must

- understand the subject matter,
- understand how to teach it, and
- understand how to motivate people to learn.

Training conducted by supervisors has special challenges. You are a busy person and have many concerns—of which safety is only one. A training session should be brief, clear, and to the point to be well received and effective. Keep an open mind and a helpful attitude. Use your experience and knowledge to help trainees relate to safety situations within the Navy and in their job. Your goals are as follows:

- To arrange for conditions that allow effective learning. Good environmental conditions won't make your training effective, but poor conditions can prevent personnel from learning even during the best training session. Arranging for a good learning environment is more of a challenge aboard ship.
- To clearly emphasize the most important points as they relate to the Navy.
- To impress your students with good safety attitudes.

To attain these goals you should take the following steps:

- Prepare an outline or lesson guide on your topic. The *NAVOSH Training Guide for Forces Afloat,* NAVEDTRA 10074, includes 20 NAVOSH lesson guides. You can adapt them to fit your audience.
- Preview the film or video tape before you conduct training. Before you begin training, you should

- Preview the film or video tape before you conduct training. Before you begin training, you should first go through the entire program at least once to become familiar with the subject. Anticipate questions people may ask and be prepared to answer them.

- Study the current Navy safety policies and regulations that relate to the program. List the references for your topic in the lesson guide.

- Use handout materials if they can add to the training, Handouts work two ways—they give students something to take back with them to the work area, and they are a good source of information for later reference or summary. The lesson guide that supports a specific topic may provide suggested handout materials you can easily reproduce on a copier machine.

- Acquaint yourself with your lesson guide or outline. If you get lost or confused, you will look unprepared. That can discredit you in the eyes of your students.

- Pay attention to class time. Keep the session moving and lively. Nothing is worse than a session that drags on aimlessly and painfully.

KEEP TRAINING SHORT!

TRAIN EARLY IN THE DAY!

At times you may have problems creating a good climate for learning; you may have to search for a place to conduct training. Aboard ship, you may find yourself teaching in a crew's mess area or a workshop. Ashore, you may have to teach in a lunchroom, conference room, or shop area. Students may have to stand. You may also have noise to contend with from ventilation or operating equipment. Understand that certain factors affect learning, including the "classroom" itself.

Simple human needs affect how well or how fast we learn. Physiological needs include being cold, hot, hungry, or tired. Having such needs will prevent personnel from learning because they will be concentrating on their body's needs first. Social needs have an impact on any group of people. All people want to have a feeling of belonging and to feel needed by others. Personnel develop a sense of belonging more easily within familiar surroundings. Adults also have an ego need; that is, a need to feel useful and respected. Try not to talk down to your students or over their heads. **Never assume** they should know a safety precaution simply because it requires common sense, and never belittle them if they don't.

The safety instructor's style is also an important factor. In developing your own style, be sure you observe the following guidelines:

- Always accept a person's answer—don't embarrass a student who has given the wrong answer. Try to provide a positive statement. Say, "You're on the right track," rather than, "That's wrong."

- Talk to the entire group, not just to the front row. Move around. Speak loud enough that people sitting in the back of the room can hear you.

- Watch your mannerism. Relax. Take command of the group by your body language.

Safety training is often routine and repetitive. Impress upon your students the importance of safety training. Be prepared and present your training material in a professional and enthusiastic manner.

SUMMARY

In this chapter you have learned about the history of the NAVOSH Program. We have introduced you to the current safety organization's program mission and objectives. We discussed the Naval Safety Center. We addressed safety and occupational health principles along with the elements of a local safety program. Remember, an effective safety program is everyone's responsibility. **Safety is a six-letter word for a 7-day job!**